

CONFIGURABLE EMBEDDED PROCESSOR

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ABSTRACT OF THE DISCLOSURE

A microprocessor system includes a multi-bank memory having a first memory bank and a second memory bank, a muxing circuit, a CPU and a DMA controller. The muxing circuit allows the CPU to access one of the memory bank while allowing the DMA controller access to the other memory bank at the same time. Thus, the microprocessor system needs to process multiple data sets, the CPU can be processing a first data set in the first memory bank while the DMA controller is writing a second data set in the second memory bank. When the CPU is finished processing the first data set and the DMA controller is finished writing the second data set, the muxing circuit is reconfigured so that the CPU can process the second data set in the second memory bank and the DMA controller can write a third data set in the first memory bank.